

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



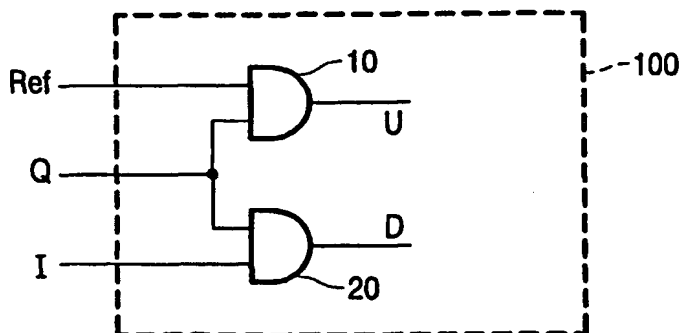
(43) International Publication Date
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number
WO 2004/021574 A1

- (51) International Patent Classification⁷: **H03L 7/089**, 7/087, H03D 13/00
- (21) International Application Number: PCT/IB2003/003726
- (22) International Filing Date: 31 July 2003 (31.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
02078579.6 30 August 2002 (30.08.2002) EP
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PHASE LOCKED LOOP



(57) **Abstract:** A phase locked loop comprising a phase detector (100) for determining a phase difference between a reference signal (Ref) and mutually phase shifted signals (I, Q) to generate frequency control signals (U, D), the phase detector (100) comprising: means (10) for obtaining a first one of said frequency control signals (U, D) by binary multiplication of the reference signal (Ref) and one of the relative phase shifted signals (I, Q); and means (20) for obtaining a second one of said frequency control signals (U, D) by binary multiplication of the relative phase shifted signals (I, Q).